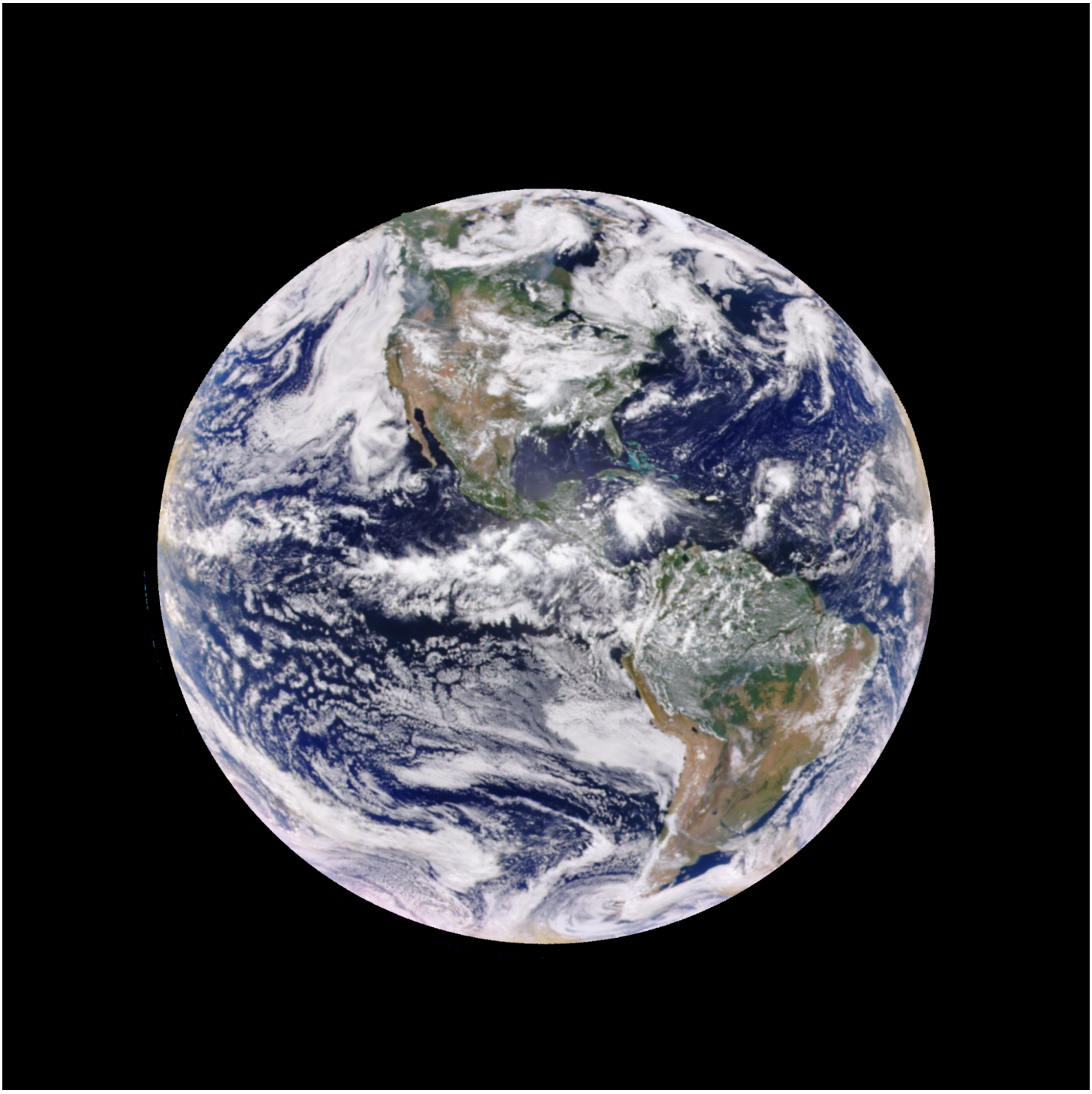
LOCKHEED MARTIN WILL BUILD NEW SPACE INSTRUMENT FOCUSED ON VEGETATION HEALTH AND CARBON MONITORING

News / Manufacturer



Scientists will get a better understanding of our planet's carbon cycle and vegetation health through a first-of-a-kind NASA instrument built by Lockheed Martin. The Geostationary Carbon Cycle Observatory (GeoCARB) mission will use an advanced infrared spectrograph hosted on a commercial geosynchronous satellite. The project is led by Principal

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Investigator Dr. Berrien Moore at the University of Oklahoma.

“Lockheed Martin has the right skills to make GeoCARB a success, bringing together our deep expertise in infrared sensing and hosted payloads,” said Gary Kushner, the Lockheed Martin instrument program manager. “Through our collaboration with the University of Oklahoma, NASA and Colorado State University, we can deliver better information about our planet’s health to decision makers and scientists around the globe.”

Lockheed Martin’s Advanced Technology Center in Palo Alto, California, will build the instrument, which has its roots in the Near Infrared Camera on the James Webb Space Telescope. Instead of staring into deep space, this mission will examine infrared wavelengths to measure carbon dioxide, carbon monoxide and methane in Earth’s atmosphere along with Solar Induced Fluorescence, a measure of vegetation health. GeoCARB is expected to launch in 2022.

The instrument will be launched as a hosted payload on an upcoming commercial satellite in geostationary orbit over the Americas. This expands the corporation’s experience in hosted payload integration, made possible by innovative instruments that offer compact and affordable capability. This cost-capped mission will demonstrate the ability to perform hosted geosynchronous payload missions at a fraction of the cost of a standalone mission.

The Lockheed Martin team brings together the heritage of more than 100 payloads and instruments launched in the past 30 years. Lockheed Martin’s expertise in Earth remote sensing includes recent successes like the Earth Polychromatic Imaging Camera (EPIC), which streams high-resolution imagery of the planet from its observation station one million miles away; and the Geostationary Lightning Mapper, whose first of four units launched Nov. 19, 2016 aboard the new Geostationary Operational Environmental Satellite R-Series satellite.

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